

present in that locality on May 18, 1913, when two more specimens were taken. Mr. Brown saw two at the same place on May 16, 1914, although circumstances prevented his collecting any.

***Arenaria melanocephala*.** BLACK TURNSTONE.—Migratory, for the most part along the coast, although Mr. Brown shot a pair at Tacoma on August 24, 1913, that were sitting on a raft of logs out in the bay. Mr. Cantwell reports them as winter residents at Dungeness, where his records range from August 18, December 30, January 16, to February 25.

Mr. Lien reports twenty as being the greatest number that he has seen at one time.

***Hæmatopus bachmani*.** BLACK OYSTER-CATCHER.—Without doubt resident throughout the year, although specific records for every winter month are lacking. Mr. Lien has taken them in November and on December 22, 1916. They breed fairly commonly on the rocky islands off the coast, fresh eggs being taken throughout the month of June. Three eggs is the number most commonly found. The nest is placed among the rocks fifteen feet or more beyond the reach of high water, and is composed of small stones, chips of rock, with a few small pieces of crab claws and shell.

THE BIRDS OF DESECHEO ISLAND, PORTO RICO.

BY ALEXANDER WETMORE.

THE island of Desecheo, west of Porto Rico, in Mona Passage, is distant nearly seven leagues from the town of Aguadilla. Though Desecheo has been a prominent landmark for ships passing between Porto Rico and Santo Domingo since the early voyages of discovery, its rough broken shoreline, with difficult landings and lack of a certain water supply, have left it little known. Fray Iñigo Abbad in 1788¹ describes the island as uninhabited but frequented at times by smugglers. It was said that there were wild goats on it at one time which, with crabs and shellfish, furnished food to these casual visitors. The banks off the southern shore have been noted for their fish, and fishermen coming at irregular intervals

¹ (Abbad y Lasierra, Fray Iñigo) *Historia geográfica, civil y política, de la Isla de S. Juan Bautista de Puerto Rico*, Madrid, 1788, p. 203.

from Porto Rico established temporary camps on the island where they lived for short periods and salted their catches.

Gundlach passing north of Desecheo in 1874 remarked on the abundance of waterfowl around it but did not visit it during his work in Porto Rico. Bowdish crossed from Aguadilla on June 24, 1900, and returned on the same day. He came again the following year and remained from July 6 to 10. All that was known of the bird life of the island prior to 1912 is embodied in his notes.

During my stay in Aguadilla in June, 1912, I made many inquiries concerning Desecheo and finally arranged to visit the island. With two fishermen, Juan and Pedro, who were familiar with Desecheo, I left Aguadilla on June 13 in a small open sailboat. We reached the island about five that night and after some difficulty made a landing in a small sandy indentation in the cliffs. We camped on the beach while a small cave served as a work room and shelter from the intense heat of the sun. We worked here until June 16, when we returned to Aguadilla as a storm was brewing and our water supply was low.

In December, 1912, Desecheo Island was made a bird reserve, a wise regulation, as sooner or later charcoal burners in search of wood would have visited it and destroyed the shrubs that now support and shelter part of the sea bird rookeries.

PHYSICAL FEATURES.

Desecheo Island is about one and one-fourth miles long by somewhat more than three-fourths of a mile broad. The island is rounded in general form with points projecting at the eastern and western ends. Inland the slopes rise steeply to a double pointed hill, the higher part of which is six hundred feet above sea level. The shore line is rocky and abrupt. In three places there are small bays with sandy beaches, back of which rise cliffs from thirty to fifty feet high. An ill-defined path leads around three sides of the island, but the eastern end is difficult of access. Strong currents sweep past, the surf is usually heavy, and there are rocks offshore in the little bays so that landings are made with difficulty.

The soil is thin and rocky but above tidemark the island is cov-

ered with vegetation. The core of the island is made up of volcanic rock upon which are deposits of limestone. Along the shore this limerock is eaten and eroded by wave action and shallow caves are found in several places.

The island was very dry, with no springs or watercourses. I was to'd that heavy rains fell at irregular intervals, and small basins in the rock had been dammed to catch rainwater. The sun was intensely hot during my stay, but the nights were cool and pleasant.

GENERAL CONDITIONS.

The vegetation somewhat resembled that of wooded hills on Culebra Island. The short-stemmed, heavy-limbed West Indian Birch (*Elaphrium simaruba*) grew on the hill slopes mingled with the Palo de Burro (*Capparis cynophallophora*). Near the shore the Té de la Playa (*Corchorus hirsutus*) was common; the Bejuco de Paralejo (*Stigmaphyllon lingulatum*) grew everywhere. There were great beds of *Opuntia* along the cliffs, *Cereus* was abundant, and a large branched cactus formed dense thickets. Small openings in the brush were grown with *Panicum utowanæum* and *Valota insularis*. These grass-grown openings were few in number and small in extent. Cacti and thorny creepers, that bound the shrubs together, made a dense jungle through which progress was difficult, so that it was necessary to stay in the trail skirting the shore or make a new one with the machete.

I noticed many signs of rodents in the grass and under the bushes and one evening after sunset found rats abundant and very tame while taking a walk beyond the rookeries above camp. Three that I shot with an automatic pistol were *Rattus rattus*, and as nearly as I could tell in the dim light all were of this small species. They were feeding on the seeds of low plants and tender herbage. A few bats were seen but under conditions that did not allow identification. I saw no trace of the wild goats that were said to range here at one time. From the dense growth of vegetation I judged that they had disappeared many years before.

The curious *Siguana* (*Ameiva* sp.) a terrestrial lizard, was found in sandy localities and was fairly common. One that lived near

my camp was more or less of a scavenger and ate bits of meat left on the fish bones that I threw out. An *Anolis* intermediate in its characters between *Anolis cristatellus* of Porto Rico and *A. monensis* of Mona Island was abundant and several specimens were preserved.

BIRD LIFE.

In his account of the birds of Porto Rico, Mr. Bowdish (1902-03) gives eight species found on Desecheo Island. I have added three more to this number, raising the known list to eleven species. One of the additions, the Scaled Pigeon, is included on the authority of the fishermen who were with me. The larger part of the species found here are forms that breed habitually on similar small isolated islands. These are the Boobies, Terns and Man-o'-War Birds. Among others, the Zenaida Dove is apparently resident. Only one passerine bird was found, the Pearly-eyed Thrasher, a species that in Porto Rico is very rare on the main island but is abundant on the small islands around it. The absence of *Cæreba portoricensis* is notable as this species is widespread in its occurrence. During the winter season it is probable that a number of migrant land and water birds stop here for short periods, and it is to these transients that we must look for other additions to the avifauna of the island. Bowdish (1900, p. 120) on his first visit says that he thought he heard the note of *Vireosylva calidris* but was uncertain. The "Sooty Tern" that he records (1900, p. 119) is *Anoüs stolidus*, and not *Sterna fuscata*.

BIBLIOGRAPHY.

There are three papers that make direct reference to the birds of Desecheo Island. Stahl and Gundlach both mention species that were reported to occur on this island but neither of these authors makes definite statements concerning its avifauna. The papers mentioned follow:

BOWDISH, B. S.

1900. A Day on De Cicheo Island, *Oölogist*, 1900, pp. 117-120.

1902-03. Birds of Porto Rico. *Auk*, 1902, pp. 356-366, and 1903, pp. 10-23.

WETMORE, A.

1916. Birds of Porto Rico, U. S. Dept. Agric. Bull. 326, 1916, pp. 1-140, 10 plates (including map).

ANNOTATED LIST.

1. **Phaëthon** sp. TROPIC BIRD.—Bowditch (1902-3, p. 35S) saw Tropic-Birds around Desecheo Island but did not determine to what species they belonged. These birds may have been *Phaëthon americanus* Grant as that is the common species of this region. (Cf. Wetmore, 1916, p. 18).

2. **Sula piscator** (Linnæus). RED-FOOTED BOOBY.—About two thousand Red-footed Boobies were present on the island at the time of my visit. All were in one colony. (Wetmore, 1916, pp. 18-19).

3. **Sula leucogastra** (Boddaert). BOOBY.—The Common Booby outnumbered any other species of bird on Desecheo Island at the time of my visit. These Boobies were distributed through the dense brush on the slopes so that it was difficult to arrive at their exact number, but I estimated that from 8,000 to 10,000 individuals were present. The greater part of these birds remained within four hundred feet of the shore, but many spread inland over the entire island ranging to the tops of the hills. The young were all grown, though I saw a few with down feathers clinging to the feathers about the head. Though as strong on the wing as their parents, these immature birds were averse to flying and usually merely scrambled out of the way. The adults were unable to rise from a level surface, and as I passed along the narrow trails many remained stock still snapping and hissing at me. It was wise to avoid their powerful bills as they bit and fought viciously. They flew easily from the branches of low trees and bushes or sailed down from the cliffs until, gaining momentum, they rose with strong wing beats. On the whole they showed little fear and I caught several by pinning them down with the barrel of my gun. Others floundered away over the rocks and through the plant growth unmindful of cactus thorns and the rough limestone. Many were seen with thorns or even small lobes of cactus hanging to feet, neck or wings, easily demonstrating how these prickly plants might be carried from one island to another.

On the wing Boobies were strong and graceful. Hundreds swung and circled about my head as I passed through the colonies. Collecting them was an easy matter. It was necessary only to pick out one desirable for a specimen, follow it until it was at a proper distance, and then drop it on the rocks. At a gunshot there was a great rush and commotion among those at rest and the air was filled with birds circling and sailing, that often passed close overhead. Gradually the confusion would cease and the birds would soon be perched all about me. On the rough limestone blocks above the sea they sat in rows and did not drop off until I approached closely. The call-note of the Booby was a loud *quack, quack, quack*. I saw them fishing far out at sea from the island and birds passed in and out above my camp all through the day. Even at night there was much commotion among them.

Boobies are said to nest from late in June until October. From the size of many young seen in June I would extend the latter date to February. It

was said that eggging parties visited Desecheo at times but the currents and the rocky shoreline make landing difficult and laborious so that the birds are not often disturbed.

4. **Fregata magnificens** Matthews. MAN-O'-WAR-BIRD.— About 175 pairs nested on Desecheo Island in 1912 and all had well grown young at the time of my visit. A pair of adults was collected on June 15. The female fell into the sea when shot and floated for some time with the bill submerged. On skinning this bird I found the air-sacs between skin and body filled with water.

5. **Hæmatopus palliatus** (Temminck). OYSTER-CATCHER.— Three Oyster-catchers were found June 14 on flat rocks washed by the waves. Although other birds of this uninhabited island were very tame the Oyster-catchers were wary. When I came in sight they flew to some outlying inaccessible rocks and repeated this performance whenever I appeared. The whistle was louder and sharper than that of *H. bachmani* with whose notes I had been familiar in the Aleutian Islands. Others were seen on the following day but none were taken. Mr. Bowdish (1902-03, p. 360) noted this species.

6. **Larus atricilla atricilla** Linnæus. LAUGHING GULL.— About thirty Laughing Gulls were seen on Desecheo but no nests were found. These Gulls worked along the beaches hunting for food or perched on boulders commanding an outlook of the water line. An adult was collected June 14.

7. **Anous stolidus stolidus** (Linnæus). NODDY.— The Noddy was abundant on Desecheo and was breeding in the limestone ledges near the sea. At the time of my visit there were about two thousand here while many more were feeding a few miles offshore. On the cliffs above camp was a colony of two hundred, that was never quiet day or night. Many had not picked their nesting sites as yet and were examining the ledges, quarrelling with the birds already settled and in turn getting their tail feathers tweaked sharply. When alarmed the Noddies flew all about me, calling harshly and there was great excitement among them at every intrusion. Some would leave their nests and dart fiercely at my head while others remained on their eggs until I was almost within reach. These terns were more or less active all night long, flying about and calling loudly. The common call note was a harsh *Kar-r-rk* and a scolding note resembled *Kwok Kwok*. In feeding the birds hovered over the water, darting quickly down, poising an instant while picking something from the surface and then rising again. Eggs taken ranged in incubation from fresh to well incubated. No young were found. Birds were collected for skins on June 13, 14 and 15. Mr. Bowdish (1902-03, p. 358) found a few well grown young on June 24, 1900.

8. **Sterna anætheta** Scopoli. BRIDLED TERN.— A common breeding bird. I estimated that there were about 1500 of these terns on Desecheo Island. Many were gathered on some large rocks lying offshore that I could not reach, while others frequented the limestone cliffs and huge

boulders on the main island. At a gunshot all those near would rise and circle with the other birds. On the wing these terns were swift and graceful. Frequently half a dozen would dart out together over the water and then circle back more slowly. Males were seen standing on the rocks above the females on their nests and as I approached swooped at my head with angry cries. The nests examined were in hollows on the tops or sides of huge blocks of limestone in situations protected from the blazing rays of the sun. Some were placed in holes eaten into the rocks by the action of the water. The nests were made of a few loose pebbles and bits of loose limestone gathered together with perhaps a feather or two added. Two eggs collected were badly incubated. No young were observed. Apparently the breeding season varies from year to year as Mr. Bowdish (1902-03, p. 357-358) found fresh eggs on June 24, 1900, and notes an egg advanced in incubation taken July 6, 1901. I collected four males and one female on June 14.

9. *Zenaida zenaida lucida* Noble. PORTO RICAN DOVE.— This Zenaida Dove was common in the growths of West Indian birch and other shrubbery that covered the arid slopes of Desecheo Island. The males called all day long, but in the thorny growths it was difficult to approach them. I found scattered birds feeding in small openings or along the trails. At low tide these doves were seen frequently about pools of salt water left by the receding tide on the rough limestone of the shore. As there was no fresh water on the island it was a question in my mind as to whether or not they were drinking this sea water.

Low¹ remarks that *Patagiænas leucocephala* is said to cross from Swan Island to Honduras, a distance of ninety-eight miles, to secure water in times of drought. I saw no indication, however, that these Zenaida Doves left Desecheo for this purpose.

10. *Patagiænas squamosa* (Bonnaterre). SCALED PIGEON.— On June 15, the fishermen who were with me reported seeing several Scaled Pigeons. There seems to be some migration among these large pigeons, as at some seasons they are said to be fairly common here.

11. *Margarops fuscatus fuscatus* (Vieillot). PEARLY-EYED THRASHER.— These thrashers, the only passerine birds noted, were common on Desecheo Island. In the dense brush it was difficult to locate them though their call-notes were often heard. The fishermen who visit the island occasionally had dammed a hollow in the rocks to catch rain water, and Thrashers came often to this tiny pool. There was no other fresh water on the island so that the birds must do without in dry seasons. A pair of Pearly-eyed Thrashers had their nest in the roof of a small cave which served me as a shelter from the sun while making up skins. This nest apparently was a bulky structure as grass and twigs projected from all the openings leading into the crevice in which it was located. The female was incubating. Both birds perched about on the rock shelves without fear

¹ A Naturalist on Desert Islands, London, 1911, p. 46.

of me. They fought continually with the Noddies that were nesting there and though the terns were the aggressors in most cases, they were always worsted in the encounters. The male sang in the evenings from a cactus just above the cave entrance, frequently calling until it was almost dark.

SOME RECENT CONNECTICUT BIRD NOTES.

BY ARETAS A. SAUNDERS.

THE following notes are based on my observations in the past four years in Connecticut and relate to occurrences that are unusual and especially interesting.

Uria lomvia lomvia. BRÜNNICH'S MURRE.— Four seen closely at Norwalk, December 31, 1916.

Larus delawarensis. RING-BILLED GULL.— Three of these gulls were seen January 27, 1917, in Norwalk Harbor. They were feeding near one of the drawbridges in company with Herring Gulls. The gulls here have been fed by people until they have become exceedingly tame. These birds were watched for a long time in the best of light. The markings on the bill and on the tips of the primaries that distinguish the species were quite plain. The difference in size was less apparent than I had expected it to be. One or two gulls of this species were seen in this same spot several times in the month of February.

Larus atricilla. LAUGHING GULL.— This species is now becoming almost common along the Connecticut shore. Others have informed me of its presence since 1914. I first noted it at Grove Beach September 1, 1916, and have since noted it several times in summer, both at Grove Beach and at Compo Cove near Westport.

Phalacrocorax auritus auritus. DOUBLE-CRESTED CORMORANT.— A flock of forty-five seen at Grove Beach May 27, 1916, and another, of seventy-four, seen at the mouth of the Saugatuck River, May 19, 1917.

Mareca americana. BALDPATE.— A rather late date for this species was that of a single drake seen on a small pond at Norwalk on the morning of March 31 and again on April 1, 1917.

Charitonetta albeola. BUFFLEHEAD.— The past winter and spring, 1916 and 1917, this species has been more abundant than I have ever seen it before in Connecticut. I first noted it at Grove Beach, December 25, 1916, when several small flocks were seen. A few were seen all winter at Norwalk and Westport, and larger flocks appeared again in the spring migration from March 10 to April 7.